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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,491	07/27/2001	Antonius H.J. Gerrits	FCI-2699/4450G	9222

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EXAMINER

LEE, DIANE I

ART UNIT PAPER NUMBER

2876

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/916,491

Applicant(s)

GERRITS ET AL.

Examiner

D. I. Lee

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 46, 47, 49, 50 and 52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 46 and 47 is/are allowed.
- 6) ☒ Claim(s) 49-50, 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed 01 April 2004. Claims 46, 49, and 52 have been amended; and no claims have been newly added. Currently, claims 46-47, 49-50, and 52 are pending in this application.

### *Specification*

2. The disclosure is remain objected to because of the following informalities:

(a) Page 2, lines 11: "Fig. 4a-4f" should be changed to --Fig. 4a-4h--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. **Claims 49-50 and 52 are remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

(a) Re claim 49, line 2 reads, "electronic card assembly deflecting less than approximately 305 mm when a force of approximately 20N is applied to an end of electronic card assembly" without clearly setting forth of the patentable structure, parameter, or intended environment of said electronic card assembly to provide the claimed range of the deflection of the card assembly, i.e., patentable formation of the structure, type of the material used, or etc. used to provide the claimed range of the result.

(b) Re claim 52, line 2 reads, "card displacing less than approximately 1.5 mm when a force of more than approximately 100N is applied to mating seam of two halves of the electronic card

Art Unit: 2876

assembly" without clearly setting forth of the patentable structure, parameter, or intended environment of the mating seam of two halves of the said electronic card assembly to provide the claimed range of the displacement of the card assembly, i.e., patentable formation of the structure of the mating seam of two halves or type of the material used, or etc. used to provide the claimed range of the result.

Therefore, claims 49 and 52, and claims depend therefrom (claim 50) are vague and indefinite. Appropriate correction and/or clarification are required.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 49-50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persia [US 5,574,628-previouslly cited by the examiner] in view of Sakurai [publication: Electronic Manufacturing Technology Symposium, 1995, The basic processing parameters**

**and reliability evaluation results for the new IC-Card packaging method by using transfer molding, previously cited by the examiner].**

Persia discloses an electronic card or a PCMCIA frame kit with a printed circuit board assembly interposed between the metallic materials of card shields. The specific structure of the card assembly includes the metallic material of card shields having edges wherein the tabs on the edges of one shield engage recesses on the edge of the other shield and each of the tabs includes an arcuate member having an oblique projection which engages the other shield, and the recess has angled ends, which engage the arcuate member of the tabs. The tabs are resilient and act like springs over their entire lengths, provides a stable and rigid frame kit, and all structure of the card assembly yields some degrees of rotation, deflection, and displacement when a force is applied to the structure. The metallic material of the electronic card shield with the specified structure of Persia provides a predetermined measurable deformation (i.e., rotation, deflection, displacement) when it is subjected to a specific given force;

Persia does not teach the modifying the structure of the frame kit in for more rigid assembly.

Sakurai teaches the basic process parameters and reliability evaluation results for the new IC-card packaging. The IC card packaging technology uses plastic frame to mold the frame. The frame kit designs includes two metal cover which are adhesive bonded to a plastic frame, two metal covers which mechanically snap fit to a frame, and two metal cover/frame subassemblies which are ultrasonic welded together. The adhesive can be pre-applied to prove a more rigid card assembly. Further, ultrasonically bonded frame kits are faster to assembly than adhesive bonded styles, and provide a rigid structural (see the frame kit styles on page 313).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sakurai in the teaching of Persia in order to obtain more rigid assembly by modifying the structure of the frame kit.

Persia as modified by Sakurai fails to teach the specific mechanical stress of the electronic card, i.e., electronic card assembly deflecting less than approximately 305 mm when a force of approximately

Art Unit: 2876

20N is applied to an end of electronic card assembly and the card displacing less than approximately 1.5 mm when a force of more than approximately 100N is applied to mating seam of two halves of the electronic card assembly.

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to further modify the structure of the frame kit to obtain an optimum mechanical stress level of the electronic card. Further, the fact that applicant has not clearly define the structure, parameter, or intended environment of said electronic card assembly to obtain the claimed deflecting or displacement result, it would have been an obvious artisan of ordinary skill in the art to further modify the structure, material, or intended environment of the card assembly to provide the claimed range of the deflection and displacement of the card assembly, i.e., formation of the structure, type of the material used, or etc. Thus, modifying the structure of the frame kit to obtain an optimum mechanical stress range would have been an obvious extension taught by Persia as modified by Sakurai.

**Re claims 50 and 52:** Persia as modified by Sakurai does not specifically teach that the printed circuit board is not included during the deformation test.

Due to the fact that the electronic card assembly include a shield and a printed circuit board therein, it would have been obvious extension to an artisan of ordinary skill in the art at the time the invention was made to provide a deformation of the frame kit or shield with and without the electronic card assembly in order to obtain the exact deformation characteristic of the frame shield with and without the printed circuit board. Accordingly, measuring the deformation characteristic of the shield without the electronic card assembly during the shield deformation test would have been an obvious expedient.

### *Allowable Subject Matter*

8. Claims 46-47 are allowed.
9. The following is an examiner's statement of reasons for allowance:

Persia discloses an electronic card or a PCMCIA frame kit with a printed circuit board assembly interposed between the metallic materials of card shields. The specific structure of the card assembly includes the metallic material of card shields having edges wherein the tabs on the edges of one shield engage recesses on the edge of the other shield and each of the tabs includes an arcuate member having an oblique projection which engages the other shield, and the recess has angled ends, which engage the arcuate member of the tabs. The tabs are resilient and act like springs over their entire lengths, provides a stable and rigid frame kit, and all structure of the card assembly yields some degrees of rotation, deflection, and displacement when a force is applied to the structure. The metallic material of the electronic card shield with the specified structure of Persia provides a predetermined measurable deformation (i.e., rotation, deflection, displacement) when it is subjected to a specific given force;

Kilmer teaches a PCMCIA or an electronic card assembly standard specification requires that the physical structure of the electronic card assembly must undergo and pass a number of stringent mechanical test such as a shock and vibration test, a bend test, a torque test, and etc.

One of ordinary skill in the art would not have been motivated to modify the teachings of Persia and Kilmer, alone or in combination with other references, in order to obtain the specific claimed deformability of the electronic card assembly, i.e., the specific deformability of the card assembly without printed circuit board withstanding the rotating angle of greater than approximately  $10^\circ$  when the torque of greater than approximately 1.2 N-m is applied during the torque test, as set forth in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Response to Arguments*

10. In the response filed 04/01/04, Applicant has amended claims 49 and 52 broader. For example, claim 49 now recites a deflection or displacement range (i.e., approximately 3.5mm) of the electronic card

Art Unit: 2876

assembly without the patentable structure, parameter, and intended environment of said electronic card assembly (i.e., a PCMCIA bend test where a minimum requirement of bending is required in the PCMCIA standard) to provide the claimed range of the deflection or displacement of the card assembly. The applicant fails to provide the patentable formation of the structure, type of the material used, or etc. used to provide the claimed range of the result. Claims of 49-50 and 52 (as the amended) are no longer allowable. Accordingly, the examiner newly set forth the rejection on claims 49-50 and 52 (see the rejection above).

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### *Conclusion*

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is (571) 272-2399. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2876

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D. I. Lee  
Primary Examiner  
Art Unit 2876

D. L.